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The role of the Committee on Sustainable Energy and its subsidiary bodies in supporting the 2030 Agenda on Sustainable Development

The role of the Committee on Sustainable Energy and its subsidiary bodies in meeting the 2030 Agenda on Sustainable Development

Note by the secretariat

Summary

This document maps activities carried out under the sustainable energy subprogramme of the United Nations Economic Commission for Europe that support countries in their pursuit of the Sustainable Development Goals, as set out in the 2030 Agenda for Sustainable Development (2030 Agenda).

In light of the accelerating transformation of the energy system and ongoing changes in the operational imperatives of the United Nations, the Committee on Sustainable Energy (the Committee) is invited to provide views and consideration to a structure and topical approach that would allow swifter reaction and increased impact on energy for sustainable development.

While the work of the Committee and its bodies is driven by global agreements and mandates from member States, scientific evidence, technical breakthroughs and geopolitical developments strengthen the need for a strategic rethinking of the work at hand. Global megatrends, including urbanization, the need for sustainable cities and raw materials management and a better understanding of the scientific and socio-economic relationships further call for a renewed view across operational connectivity and relevance.

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I. Introduction

1. This document maps activities carried out under the sustainable energy subprogramme of the United Nations Economic Commission for Europe (ECE) that support countries in their pursuit of the Sustainable Development Goals (SDGs), as set out in "Transforming our world: the 2030 Agenda for Sustainable Development" (2030 Agenda). It describes activities that support the follow-up and review of the 2030 Agenda across the SDGs and that aim to help countries develop national action plans for SDG implementation.

2. The work of the sustainable energy subprogramme is carried out through international policy dialogue, normative work, capacity-building and dissemination of good practices and lessons learned. Activities concentrate on the areas of energy efficiency, clean electricity production, renewable energy, coal mine methane, natural gas, resource management, and energy security.

3. This document must be seen in the context of the Secretary-General's ongoing efforts, at the request of the General Assembly, to strengthen the United Nations development system through streamlining activities. The reform seeks to enhance the capacity of the system to address the full range of sustainable development challenges in an integrated manner, as set out in the 2030 Agenda.

4. The 17 SDGs are universal, interlinked and indivisible and demand that the United Nations reinvent to better serve countries and people. To bring about transformational change, the Secretary-General has called on the principals of the United Nations development system to develop new mindsets and cross-cutting capacities to respond to a comprehensive and universal agenda; strengthen the capacity to mobilize partnerships and financing at scale to support country priorities; and generate synergies across the United Nations development system to deliver greater results for people.

5. In consequence, the ECE Executive Committee (EXCOM) was informed by the ECE Executive Secretary of her proposal to enhance ECE's role in assisting countries with advancing SDGs.[1] The nine SDGs that define the core specialization of ECE are SDGs 3, 6, 7, 8, 9, 11, 12, 13 and 15.[2] These SDGs largely overlap with the gaps identified in the first report of the Secretary-General on the repositioning of the United Nations development system as a whole.

6. To strengthen the impact of its work and within current mandates, ECE intends to enhance activities in the areas covered by these nine SDGs. Four possible high-impact areas have been singled out as a result of the ongoing reflection with EXCOM at ECE level:

(a) Sustainable use of natural resources;

(b) Sustainable and smart cities;

(c) Sustainable mobility and smart connectivity;

(d) Measuring and monitoring SDGs (methodology).

7. The emphasis will be on delivering concrete results that show progress on the implementation of the 2030 Agenda at the country and regional level (the so-called "do-tank") taking full advantage of ECE's convening power, inclusiveness, and technical excellence.

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[1] Ninety-eighth meeting of EXCOM on 18 May 2018: "Main directions of UNECE ongoing work on further SDG alignment" (informal document no. 2018/12)

[2] https://www.un.org/sustainabledevelopment/sustainable-development-goals/

8. 2018 is also the year in which progress of SDG 7 implementation will be assessed at the High-Level Political Forum in New York (HLPF), 9–18 July 2018.[3] The outcomes of the review will be reported at the twenty-seventh session of the Committee on Sustainable Energy (the Committee) and might influence the Committee's future programme of work.

9. This paper has been prepared for the Committee as a basis for discussion about how the activities of the Committee and its subsidiary bodies might provide better support to member States as they undertake to attain "energy for sustainable development", given the series of parallel reform mechanisms and review processes mentioned above. Other ECE Committees are undergoing similar reflection periods, so the Committee is well aligned with an ECE-wide process.

10. The reform of the United Nations development system is an ongoing process and Member States will decide on its final shape, however, the Committee and its subsidiary bodies must be ready to implement requests swiftly and in line with the trends of the ongoing fast-paced energy transition to remain relevant for member States.

11. The intent is to open a strategic exchange on near-term priorities for the sustainable energy sub-programme, longer-term objectives that will shape its resources and structure, and decision-making procedures. In its session, the Committee will have the opportunity for a strategic dialogue leading towards a Committee vision, mission and strategy based on agreed opportunities and challenges. While the work of the Committee and its bodies is driven by existing mandates from member States, diverse factors such as scientific evidence, technical breakthroughs and geopolitical developments strengthen the need for a strategic rethinking of the work at hand. It is hoped that the Committee will express support for a continuing conversation based on this document so that proposals and a roadmap for implementation can be presented for adoption at the Committee's twenty-eighth session in 2019.

II. Background

12. The objectives of the sustainable energy subprogramme are set out in the 11 April 2013 Commission Decision A (65) on the Outcome of the Review of the 2005 Reform of ECE (including subsection II E) and the Executive Committee decision of 4 December 2013 on the terms of reference of the Committee and mandates and terms of reference of its subsidiary bodies.

13. Responsibility for the subprogramme is vested in the Committee. The subprogramme is implemented under the overall oversight of EXCOM and is serviced by the Sustainable Energy Division.

14. The Committee is an intergovernmental body that provides ECE member States with a platform for international dialogue and cooperation and is mandated to carry out a programme of work in the field of sustainable energy with a view to providing access to affordable and clean energy to all, in line with the 2030 Agenda, and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector.[4]

15. The Committee oversees the following six subsidiary bodies: (a) Group of Experts on Energy Efficiency; (b) Group of Experts on Cleaner Electricity Production on Fossil Fuels; (c) Group of Experts on Renewable Energy; (d) Group of Experts on Coal Mine

[3] https://sustainabledevelopment.un.org/hlpf

[4] Revised draft programme of work for the ECE sustainable energy subprogramme for 2018-2019 (ECE/ENERGY/2017/11/Rev.1)

Methane; (e) Expert Group on Resource Classification[5]; and (f) Group of Experts on Gas. Further, the Committee engages in an energy security dialogue. It has taken interest in tracking progress of the energy-related SDGs (the regional component of the World Bank's "Global Tracking Framework"),[6] the project "Pathways to Sustainable Energy,"[7] modernisation of energy infrastructure and methane management in extractive industries and oversees these initiatives directly.

16. Work is oriented based on the attainment of the energy related SDGs. Attainment of SDG 7 is falling short in the ECE region except for the target on 100% access to electricity,[8] which is only one of the elements for ensuring access to affordable, reliable and modern energy services. Challenges and opportunities co-exist in access to modern energy services in the region and also in the world. If "access" were to be defined more broadly, then challenges remain on access to clean cooking fuel, technology, heating services and on reliability, affordability and quality of service, some of the aspects are included in the indicators for SDG 7.[9] The ECE region falls short as well on other energy-related indicators linked to improving quality of life. As noted above, the SDGs are universal, interlinked and indivisible. On current trends, energy will not deliver needed support to the 2030 Agenda.

17. The environmental impacts of the energy sector, particularly on climate change and air quality, are increasing at an alarming rate. In response, the Paris Climate Agreement has started to drive countries' actions and awareness. Current projections indicate that fossil energy will retain an approximately 70 to 80 per cent share of total primary energy by 2030, and this reality makes it imperative to address the environmental footprint of fossil fuels.[10] Many countries, communities, and people depend on fossil energy for incomes and livelihoods, and will do so for a foreseeable period beyond 2030. For many countries, the current political, regulatory, and industrial infrastructure is not ready for deep transformation, however, the angle of greening societies and competitiveness can play an important role, as can technology innovations and digitalization.

18. A notable and persistent gap is related to the financing of energy and industrial infrastructure, both in the context of modernising existing – aging and fossil based - infrastructure with the 2030 Agenda in mind and building cutting-edge, integrated, and new systems to the benefit of all and at affordable costs.

19. The social component of any systems transformation should not be neglected. Rapid transformation of economies that depend significantly on fossil energy will impact economic and social costs. The most vulnerable communities will need to adapt to the requirements of the new reality and confront fear of unemployment and inequality. Holistic strategies that take into account local resource bases, the social and technological conditions of countries, and the sovereignty of nations will allow countries to develop sustainable and inclusive low-carbon economies tailored to their needs, capabilities, expectations, and world views.

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[5] The Committee will be requested to approve a name change of the Expert Group on Resource Classification to Expert Group on Resource Management in its twenty-seventh session.

[6] Global Tracking Framework: UNECE Progress in Sustainable Energy (December 2017)

[7] Pathways to Sustainable Energy – Status Report (ECE/ENERGY/2018/1)

[8] Global Tracking Framework: UNECE Progress in Sustainable Energy (December 2017)

[9] https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf

[10] World Energy Outlook 2017, International Energy Agency

III. Contributions to supporting the energy-related Sustainable Development Goals

20. The present document summarizes the activities in the area of sustainable energy according to the Revised draft programme of work for the ECE sustainable energy subprogramme for 2018-2019 (ECE/ENERGY/2017/11/Rev.1).

21. The Committee's activities span a range of key SDGs beyond SDG 7, notably SDG 9 on industry, innovation and infrastructure; SDG 11 on sustainable cities and communities; SDG 12 on responsible consumption and production; SDG 13 on climate action; and SDG 17 on partnerships for the goals. The outcomes from the HPLF in New York will guide further work in this area.

Committee on Sustainable Energy	●	●	●	●	●	●
Group of Experts on Energy Efficiency	●	●	●		●	●
Group of Experts on Renewable Energy	●		●	●	●	●
Group of Experts on Cleaner Electricity Production from Fossil Fuels	●	●			●	●
Group of Experts on Coal Mine Methane	●	●	●	●	●	●
Group of Experts on Gas	●	●	●	●	●	●
Expert Group on Resource Management	●	●	◕	●	●	●

A. Group of Experts on Energy Efficiency

22. The Group of Experts on Energy Efficiency reported on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session and has since been implementing the Work Plan for 2018–2019 according to schedule. Its key contributions to the 2030 Agenda over the time period are related to SDGs 7, 9, 11, 13, and 17 in several sectors.

23. In industrial energy efficiency, the Group of Experts has continued activities to close communication gaps between policy makers and policy end users (industrial companies). The Task Force on Industrial Energy Efficiency has been established as a platform to develop stronger linkages between different types of industrial energy efficiency stakeholders and to address barriers, including the perception that energy efficiency is a complex issue rather than an advantage to further industrial productivity.

24. The Committee on Sustainable Energy and the Committee on Housing and Land Management established the Joint Task Force on Energy Efficiency Standards in Buildings in 2015. As a first step, the two Committees endorsed the "Framework Guidelines on Energy Efficiency Standards in Buildings" in 2017. This process has set in motion the establishment of international centres of excellence and a consortium of educational and research institutions to promote and implement a high-performance buildings initiative, which showcased first results in a side event during the HLPF in New York on 11 July 2018. The Joint Task Force further completed a study on the mapping of energy efficiency standards in buildings in the ECE region and is in the process of mapping energy efficient technologies in buildings in the region. It has also started a training programme on high-performance energy efficiency standards in buildings for building sector practitioners, policymakers, and trainers.

B. Group of Experts on Cleaner Electricity Production from Fossil Fuels

25. The Group of Experts on Cleaner Electricity Production from Fossil Fuels reported progress on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session and has since further implemented the 2018–2019 Work Plan according to schedule.

26. Its key contributions to the 2030 Agenda and in particular SDGs 7, 9, 11, 12, 13 and 17 over the time period are related to work that seeks to reduce greenhouse gas (GHG) emissions from fossil fuel-fired electricity generation. Thus, the activities of the Group of Experts are at the heart of the Committee's mandate and are based on an honest dialogue about the opportunities and challenges of clean electricity production; the carbon capture, use and storage (CCUS); enhanced oil recovery with CO_2; advanced fossil fuel technologies for power generation; and evaluation of efficiency-enhancing measures for coal-fired power plants.

27. The Group of Experts is in the process of assessing the role that clean electricity production will play in future sustainable energy systems and will seek the Committee's views during the twenty-seventh session. As the global energy transition is accelerating, countries will choose different pathways to meet commitments they have made, including under the 2030 Agenda and the Paris Climate Agreement. This Group of Experts could provide valuable insights about reaching some of the low-hanging fruits of the global agenda, including on nexus, efficiency and renewable energy.

28. Work has now started together with the Group of Experts on Renewable Energy and the Group of Experts on Gas on the role of fossil fuels in supporting renewable energy deployment and thus encourage deeper renewable energy penetration in the region, as there is still a need for a rapid-response capacity to maintain balance in power networks to accommodate oscillations in the output of intermittent energy sources.

29. Innovation and structural change will also be addressed. Improving energy efficiency has been a focus of intensive energy research over the past two decades. As a result, there has been steady technological innovation towards increasing efficiency and reducing emissions from the power generation of fossil fuels, most notably from coal. Work will continue and thus strengthen the achievements of the 2030 Agenda in the areas defined above.

C. Group of Experts on Renewable Energy

30. The Group of Experts on Renewable Energy reported progress on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session

and has since further implemented the Work Plan for 2018–2019 according to schedule. Its key contributions to the 2030 Agenda over the time period are related to SDGs 7, 11, 12, 13, and 17 in several areas.

31. Over the past three years, the Group of Experts has majorly contributed to closing the information and data gaps on renewable energy so persistent in the eastern parts of the ECE region through the work of the "UNECE Renewable Energy Status Report,"[11] jointly produced with the Renewable Energy Policy Network for the 21st Century (REN21) and in close cooperation with the International Energy Agency (IEA). This work allowed to establish a baseline for activities and helps track the uptake of renewable energy in the region. The joint report demonstrates that 17 countries in South East and Eastern Europe, the Caucasus, Central Asia and the Russian Federation - and home to more than 300 million people - lag in global developments both technically and financially despite significant untapped renewable energy potential. Huge opportunities for increasing renewable energy deployment exist, in particular, because in 2015 investments in renewable energy only amounted to USD 400 million, less than 0.2% of the global total, and declining from 2014. Future work will continue to refine datasets and tracking opportunities and seek the involvement of the financial sector for awareness and opportunities.

32. To address persistent barriers to accelerated uptake of renewable energy at the country level, the Group of Experts has been organizing so-called "Hard Talks" on renewable energy in this order in Georgia, Ukraine, Azerbaijan and Kazakhstan. New Hard Talks are being planned in Bosnia and Herzegovina, Montenegro, Serbia, and the Russian Federation over the time period.[12] These multi-stakeholder dialogues focused on possible solutions to existing barriers promote a demand-driven, highly visible debate which seeks to contribute elements to national action plans on renewable energy and to pathways to sustainable energy.

33. In this context, the Group of Experts has been facilitating the exchange of know-how and best practice approaches between experts from countries on how to increase energy production from renewable sources and better integrate the renewable energy sector into national energy systems. This approach intends to enable a favourable investment climate in close cooperation with key stakeholders and international partners.

D. Group of Experts on Coal Mine Methane

34. The Group of Experts on Coal Mine Methane reported progress on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session and has since further implemented the 2018–2019 Work Plan according to schedule. Its key contributions to the 2030 Agenda over the time period are related to SDGs 7, 11, 12, 13, and 17 in several areas.

35. Coal production, transportation, storage and use account for roughly 40% of global greenhouse gas emissions. As coal mines are the fourth largest source of methane emissions – a much more potent greenhouse gas than CO_2 - minimising the environmental, health and safety impacts of coal production constitutes a priority for the Group of Experts. Ensuring the safe extraction, transport, and use of methane throughout the coal mine life cycle is therefore the prime objective of the Group of Experts.

[11] http://www.unece.org/energywelcome/areas-of-work/renewable-energy/unece-renewable-energy-status-report.html

[12] http://www.unece.org/energywelcome/areas-of-work/renewable-energy/unece-hard-talks.html

36. To support this objective, the Group of Experts is in the process of developing "Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines," endorsed by ECOSOC Decision 2011/222. Recommendations target the reduction of both methane-related accidents and explosions in coal mines and greenhouse gas emissions from the whole value chain of the coal sector.

37. The movement towards zero methane-related fatalities and lower methane emissions from coal-mines is not universal, being impeded by a lack of awareness of available technologies and the guiding principles for methane drainage and use. In this context, the Group of Experts in close cooperation with its key partners such as the Global Methane Initiative (GMI) organized a number of awareness-raising and capacity-building events around the world. Seminars and technical sessions providing a platform for the exchange of knowledge and experiences between the governments, private sector and academia were held in Canada, Kazakhstan, and Poland. A fact-finding mission and a following capacity-building workshop were also organized in Colombia to assist the host country in its efforts to meet its environmental commitments and to lower its exceptionally high rate of methane-related accidents in coal mines.

38. To increase its reach and assure effective appiication of the promoted practices, the Group of Experts is in the process of establishing a worldwide network of the International Centres of Excellence on Coal Mine Methane. So far Centres have been established in China and in Poland, and three others are likely to follow. The Centres are designed as non-profit entities subject to the laws of the host country and operating under the auspices of the Group of Experts. They serve as platforms for discussion on safety, environmental and economic aspects of coal mine methane, support capacity-building activities in United Nations Member States, and facilitate the transfer of technology. Centres also contribute to further development of the Best Practices Guidance and cooperate with governments, NGOs, and industry in research activities.

39. Further, there is great potential for greenhouse gas reduction through proper management of abandoned mine methane. To this effect, the Group of Experts established a Task Force on abandoned mine methane and works on developing a publication thoroughly addressing safety, environmental, and economic aspects of this matter with partners.

40. Modernization of the energy sector cannot be avoided, nor should it be delayed further as the energy infrastructure in many countries throughout the region is aging or already at the end of its life-cycle. It is in any country's interest to undertake such structural transformation in the most cost-efficient manner and with the most holistic approach with a benefit for the whole economy in mind. The Committee has already been consulted twice on a project that explores the opportunities that lie in the transformation of large industrial complexes in a way that corresponds to the societal challenges and complexities that any structural change implies and that takes into account the long-term opportunities provided by the ongoing energy transition in innovation, digitalization and technology break-through. This project has a direct link to SDG 11 on sustainable cities, as many industrial sites have developed into large cities and agglomerations over decades, providing livelihoods for people based on a cluster of industrial conglomerates, small and medium-sized enterprises and basic industries.

E. Expert Group on Resource Classification

41. The Expert Group on Resource Classification reported progress on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session and has since further implemented the Work Plan for 2018–2019 according to schedule. To be ready and supportive of Agenda 2030, the Expert Group has implemented many new initiatives such as extending the application of the United Nations Framework

Classification for Resources (UNFC) to renewable energy, anthropogenic resources and injection projects for storage of CO_2. Guidelines for social and environmental considerations and protocols for the delivery of SDGs have and are being developed to make UNFC a unique resource management system well aligned to the targets set out in the 2030 Agenda.

42. Given ECE's focus on sustainable use of resources, the transformation of UNFC into a comprehensive resource management system is one of the areas the Expert Group has proposed to focus on in the future. Its key contributions to the 2030 Agenda, and in particular SDGs 7, 9, 11, 13, and 17 over the time period, are related to work on all resources such as minerals, petroleum, renewable energy, anthropogenic resources and injection projects where emphasis has been placed on a UNFC resource management tool-kit, that will provide a significant focus on social and environmental aspects, and alignment to SDGs in areas such as zero-waste – zero-harm, circular economy, decarbonization, resilience and increasing efficiencies through comprehensive and integrated resource production. Given the refocus on sustainable resource management, the Expert Group recommends changing its name to Expert Group on Resource Management.

43. Key accomplishments over the time period include an increasing number of countries committing to apply UNFC. This includes initiatives such as "UNFC for Africa" led by the African Union Commission and "UNFC for Europe" led by the European Commission. Similar initiatives are being discussed for Eurasia, Asia-Pacific and Latin America. ECE has entered into partnerships with the European Federation of Geologists, EuroGeoSurveys (an association of 37 national and regional geological services in Europe), the Organization of African Geological Surveys (OAGS) and the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP). Discussions are progressing with the Association of Geological and Mining Services in Iberoamerica (ASGMI) and the Latin American Mining Organization (OLAMI). The Nordic countries (Finland, Norway and Sweden) have developed sub-regional UNFC guidelines, and the Russian Federation and China have finalized bridging documents between UNFC and their national systems. The International Renewable Energy Association (IRENA) in partnership with the International Geothermal Association (IGA) and the World Bank have started a project to apply UNFC to geothermal energy in a number of countries. Mexico has initiated a project to test UNFC for sustainable management of petroleum projects as a prelude to the application of UNFC nationally for all resources.

F. Group of Experts on Gas

44. The Group of Experts on Gas reported progress on the implementation of its Work Plan for 2016–2017 at the Committee's twenty-sixth session and has since further implemented the Work Plan according to schedule. The Group of Experts on Gas focusses on: Role of gas in attaining the SDGs; Best practices in managing methane emissions along the gas value chain; Role of gas in improving urban air quality; Renewable energy and natural gas as the best combination to enhance the energy efficiency in the whole energy system; Emerging issues (biogas and biomethane, synthetic gas, power-to-gas, hydrogen, carbon capture and storage) and Promoting sustainable and clean production, distribution, and consumption of gas and Liquefied Natural Gas (LNG) in the ECE region.

45. The Group of Experts recommends to ECE member States to leverage the existing conventional natural gas infrastructure as a cost-effective entry point for developing low- or zero-emission alternatives, such as biogas, biomethane, synthetic gas, power-to-gas (hydrogen and syngas), or carbon capture and storage.

46. Its key contributions to the 2030 Agenda over the time period are related to work on exploring how gas and LNG can help ECE member States to attain SDG 7 on energy, but

also SDGs 1, 2, 5, 6, 9, 11, 12 and 13. This has taken place through multi-stakeholder policy dialogues and other events in partnership with organizations such as the International Gas Union (IGU), Marcogaz and the Global Methane Initiative.

47. The Group of Experts has noted that natural gas is an important tool in reducing concentrations of airborne pollutants and hence improve urban air quality, which is important for SDG 11. ECE has entered into a MoU with IGU. As a result, IGU released its Urban Air Quality report at the fifth session of the Group of Experts. With technical input from the World Health Organization, the Group concluded that fuel switching from solid fuels to natural gas is a highly effective measure for improving local and regional ambient air quality. The Group is now working to develop policy recommendations for ECE member States and the other United Nations Member States on the role of gas in improving urban air quality.

48. The Group published a report on "Removing Barriers to the Use of Natural Gas as Maritime Transportation Fuel." The report demonstrates the business case for using Liquefied Natural Gas (LNG) as a fuel in maritime transport, for both LNG tankers and – increasingly since 2000 – other ships. Currently, there are over 300 ships powered by LNG. LNG offers significant environmental benefits compared to heavy fuel oil and diesel both of which dominate today's market for international shipping bunkers. The report identifies drivers, key enablers, gaps and barriers to the use of LNG as a fuel in maritime transport. Reducing the use of heavy hydrocarbons and increasing the use of LNG in maritime transport could help reduce CO_2 emissions and other pollution arising from international trade.

49. A practical case study on how trucking of LNG could help ensure access to affordable, reliable, sustainable, and modern energy services to various communities and businesses in Spain was also published as a result of the work and research of the Group of Experts. The transportation of Liquefied Natural Gas (LNG) via truck loading is a fast-growing vector of natural gas delivery and the main alternative to supply via pipelines. In some situations, LNG delivered by refrigerated trucks may prove to be the most cost-effective solution to reaching communities that at present do not have access to modern energy services. In this regard, LNG could play an important role in reducing the carbon intensity of the energy sector in many ECE member States and, at the same time, help them achieve the relevant SDGs.

50. In many ECE member States, there is an opportunity to improve efficiency and reduce methane emissions along the entire gas value chain. Methane emissions from the gas value chain reduce the climate benefits of natural gas and could, if emissions are significant, undermine the role of gas in the energy system of the future. The project: "Methane Management in Extractive Industries (Upstream Oil and Gas/Downstream Gas)", funded by the United States Environmental Protection Agency (USEPA) in cooperation with the Group of Experts has now started. As well as the development of Best Practices in managing methane emissions along the gas value chain, the Group is also working on case studies on best practices for measuring, reporting, verifying, and reducing methane emissions throughout the gas value chain.

IV. Starting a strategic dialogue about impact and realignment on energy for sustainable development

51. Current activities of the Committee and its subsidiary bodies comprise the work plans of the respective bodies and cover energy efficiency, renewable energy, cleaner electricity, coal mine methane, gas, resource management and energy security. While the interaction between the groups has been improving, as a general practice they have

operated independently of one another. A key question for member States is whether the current composition and interaction of the Committee and its subsidiary bodies adequately supports them in meeting the challenges they face.

52. While the work of the Committee and its bodies is driven by global agreements and mandates by member States, diverse technical breakthroughs, and geopolitical developments strengthen the need for a strategic rethinking of the work at hand. Global megatrends, including urbanization, the need for sustainable cities and raw materials management and a better understanding of the scientific and socio-economic relationships further call for a renewed view across operational connectivity and relevance. The desired end points, in a technologically agnostic manner for the energy sector, is to improve systemic efficiency, higher environmental performance and enhanced quality of life.

53. Regarding broader thematic activities, the work of the Committee and its subsidiary bodies could be described as falling into three nominal clusters:

(a) Reducing the environmental footprint of fossil energy, including work on carbon capture and storage, high-efficiency low emissions technology, methane management in the extractive industries, energy efficiency in industry, resource management, and positioning the use of fossil energy to accelerate the uptake of renewable energy;

(b) Sustainable resource management, including work on developing a comprehensive resource management tool, deploying best practice guidance on coal mine methane, renewable energy, and enhancing the contribution of LNG;

(c) Deep transformation of the energy system towards a 2-degree pathway, including work on the project "Pathways to Sustainable Energy" and progress tracking for energy-related SDGs and indicators; exploring decarbonization pathways; energy market design including high-performance buildings and sustainable human settlements, balancing markets, energy and mobility; and modernization of energy infrastructure.

54. The Committee is invited to shape its future approach to sustainable energy in ways that take account of the major challenges countries face and the activities of other organisations and partners. The exercise would involve rethinking the opportunities, outputs, and deployment for greatest impact.

55. The secretariat considers the following activities to be well aligned with the factors set forth above for priority-setting:

(a) Development and deployment a sustainable resource management system aligned with the 2030 Agenda;

(b) Accelerated implementation of the high-performance buildings initiative: energy efficiency, affordability, connections to sustainable human settlements, accelerated uptake of renewable energy;

(c) Market design for electricity and gas: system complexity, energy as a service, and acceleration of uptake of low-carbon technology;

(d) Renewable energy: best practice policies and financing;

(e) Pathways to achieving the 2030 Agenda for energy, national sustainable energy action plans, progress tracking (including relevant indicators);

(f) Methane management in extractive industries.

56. Further, the Committee and the subprogramme are involved in a number of cross-cutting activities and events:

(a) International Fora on Energy for Sustainable Development;

(b) Technical cooperation and advisory services;

(c) Hard Talks (on renewable energy; other);

(d) ECE regional fora on sustainable development;

(e) High-Level Political Forum;

(f) International Centres of Excellence;

(g) Memoranda of Understanding with partners; and

(h) UN-Energy and SDG 7 Technical Advisory Group to accelerate the implementation of 2030 Agenda.

57. The range of activities that ECE's sustainable energy subprogramme might undertake without resource limitations, while wide-ranging, is shaped by imperatives to focus on activities in line with mandates agreed by member States and to coordinate activities optimally with other organisations and member States. A list of possible activities is included in the Annex.

58. Resource limitations require member States to prioritise and focus on near-term activities that support a long-term view on helping accelerate attainment of the 2030 Agenda. As the programme's results bear fruit, its ability to attract extrabudgetary resources (including secondments and direct financial contributions) will grow progressively.

59. Choices regarding near-term activities in a longer-term context could consider the following factors in priority-setting:

(a) Alignment with the role of energy in supporting the 2030 Agenda;

(b) Alignment with the visions of the ECE Executive Secretary and the Secretary-General;

(c) Impact, scale, enduring effect;

(d) Political relevance;

(e) Visibility and reputational impact;

(f) Ease of communication and opportunity for resource mobilization;

(g) Foundation on ECE's unique contribution and role;

(h) Degree of completion by 2020; resource efficiency;

(i) Positive consequences for other elements of the ECE programme; and

(j) Available human resources.

60. In light of the need to accelerate transformation of the energy system and ongoing changes in the operational imperatives of the United Nations, the Committee is invited to provide views and consideration to a structure and topical approach that would allow swifter reaction and increased impact, including, but not limited to, re-organizing the Committee and its subsidiary bodies, with emphasis given to operational clusters in support of the 2030 Agenda as mentioned above and to nexus activities cutting across the current groups of experts, other Divisions, and other organisations.

61. Given the need to provide faster and more efficient guidance among the Committee, its subsidiary bodies, and EXCOM, consideration could be given to establishing terms of reference that enable decision-making when the Committee is not in session.

62. A starting point could be an agreed list of priorities identified over the course of 2018-2019 to realize the Committee's vision, mission, objectives and action plans until 2030. This list has got to be built on a set of pre-established criteria, possibly including urgency, established need by member States – in relation to the 2030 Agenda and based on staff resources (see also para. 60).

63. For reflection of both re-organization and terms of reference, the Committee could request a set of documents for consideration and endorsement at the twenty-eighth session of the Committee. Those documents would be developed with full engagement of member States and the broader stakeholder community over the coming year and will be in line with above mentioned developments in the United Nations system.

V. Conclusions and recommendations

64. The following draft conclusions and recommendations are put forward for consideration by the Committee at its twenty-seventh session:

65. In the light of the discussion at its twenty-seventh session, the Committee confirms the need to reconsider its mandate and programme of work going forward to ensure strategic alignment with the 2030 Agenda for Sustainable Development and:

(a) Approves the alignment of the programme of work not only with SDG 7, but also with SDGs 9, 11, 12, 13, and 17 and encourages nexus work and linkages through the sustainable energy subprogramme to be reflected in all efforts;

(b) Stresses the importance for countries to develop concrete pathways and solutions towards sustainable energy in the ECE region and requests its Bureau to develop a strategic plan for assisting member States comprising a vision, a concrete action plan, and a roadmap for implementation to be presented by the Chair for adoption at its twenty-eighth session in 2019. A list of priorities based on predefined criteria and needed staff resources should be included in the proposal;

(c) Recommends strengthening ECE's and the Committee's role as a neutral platform for policy and technology dialogues on the attainment of energy for sustainable development and to organise a Committee-wide strategic dialogue on 16 May 2019 to explore challenges and opportunities taking account of the findings and recommendations from the project "Pathways to Sustainable Energy." Further considerations could be the nominal or operational clusters presented to the EXCOM at its ninety-eighth meeting, the outcomes from the SDG 7 review process at the 2018 High-Level Political Forum, alignment with the 2030 Agenda, recommendations from the Ninth Forum on Energy for Sustainable Development, and nexus activities. The exercise must involve considering rethinking opportunities, resources, outputs, and deployment for greatest impact;

(d) Requests its six subsidiary bodies to play a leading role in shaping this document and requests the six Chairs to present at the next session their Expert Group's role in addressing these challenges. This report back could include recommendations on the effectiveness and efficiency of the current

composition and whether the current structure adequately supports them in meeting the challenges they face;

(e) Requests the Group of Experts on Cleaner Electricity Production from Fossil Fuels to take the lead in shaping the dialogue on energy transition and to partner with the other expert groups in the process for the report back at the Committee's twenty-eighth session;

(f) Requests the subprogramme to take steps towards implementing this request, supported by the necessary documentation, including, potentially, Terms of Reference for the Committee on Sustainable Energy, its Bureau and all subsidiary bodies, and with a view to allowing decision-making when the Committee is not in session;

(g) Wishes that documents be developed with full engagement of all member States over the coming year and be in line with ongoing reform developments in the United Nations system.

Annex

List of possible activities for the Committee on Sustainable Energy and its subsidiary bodies

I. Sustainable resource management

1. Develop and implement a comprehensive resource management system based on the United Nations Framework Classification for Resources (UNFC).

2. Continue to extend the application of the UNFC tool-kit for the entire value-chain and life-cycle of all resources, including strengthening the principles, specifications, guidelines, application protocols and best practices in alignment with the 2030 Agenda.

3. Provide training and capacity-building for sustainable resource management.

II. Energy transition

1. Pathways to the 2030 Agenda for energy, indicators, sustainable energy action plans.

2. Energy Security Forum.

3. Financing the transformation.

III. Energy efficiency

1. Accelerate activities on high-performance buildings: energy efficiency, affordability, connections to sustainable human settlements, accelerate the uptake of renewables

2. Improve industrial energy efficiency.

3. Improve transport energy efficiency (natural gas vehicles; e-mobility; biomass).

4. Improve conversion efficiencies of coal and other fossil fuels.

IV. Modernising infrastructure

1. Industrial/regional restructuring and reform; socio-economic impacts

V. Energy technologies and policies

1. Natural gas (shale best practices)

2. LNG standards

3. High-efficiency low emissions technology – dissemination and financing

4. Pursue gender and diversity issues in energy

5. Renewable energy: best practices and financing

6. Improve commercial prospects for carbon capture and storage

7. Remove barriers to nuclear power

VI. Electricity and markets

1. Market design in electricity and gas – systems complexity/energy as a service – and accelerate the uptake of low carbon technology

2. Explore quality of service regulation

3. Electric systems work (smart grids; balancing markets; market design)

VII. Methane management

1. Methane management in extractive industries

2. Other